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#### FACSIMILE COVER SHEET

## SALIWANCHIK, LLOYD & SALIWANCHIK

A Professional Association 2421 N.W. 41st Street Suite A-1 Gaincsville, FL 32606

Telephone (352) 375-8100 Facsimile (352) 372-5800



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TO: Department of Customer Corrections

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FAX NO.: 703-308-7751

FROM: Doran R. Pace

**DATE:** August 14, 2000

NUMBER OF PAGES (INCLUDING COVER SHEET): 5

SUBJEC'T/MESSAGE:

Re: U.S. Patent Application Docket No. SPO-108

Serial No. 09/508,342; filed March 10, 2000

Request for Correction of Filing Receipt (4 pages, with attachments)

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Doran R. Pace, Patent Attorney

REQUEST FOR CORRECTION OF FILING RECEIPT Examining Group 1646 Patent Application

Docket No. SPO-108 Serial No. 09/508,342

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Art Unit

1646

**Applicants** 

Yoshiyuki Sakaki, Hajiine Tei

Scrial No.

09/508,342

Filed

March 10, 2000

For

Mammalian Genes Involved in Circadian Periods

Assistant Commissioner for Patents Office of Initial Patent Examination Customer Service Center Washington, D.C. 20231

## REQUEST FOR CORRECTION OF FILING RECEIPT

Sir:

Applicants respectfully request the correction of an error in the Official Filing Receipt for the above-identified patent application. Please send a corrected Filing Receipt with the following change:

The Filing Receipt lists the title of the application as:

### MAMMALIAN GENES PARTICIPATING IN CIRCADIAN PERIOD

The word "PARTICIPATING" is incorrect. The correct word is "INVOLVED." Thus, the correct title of the subject application is:

# MAMMALIAN GENES INVOLVED IN CIRCADIAN PERIOD

In addition, the Filing Receipt incorrectly lists the total number of drawings in the subject application as thirty one (31). The correct total number of drawings for the subject application is ten (10).



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Docket No. SPO-108 Serial No. 09/508,342

A copy of the Filing Receipt containing the error, along with a copy of page 1 of the subject specification showing the correct title of the subject application, is attached.

Respectfully submitted,

Doran R. Pace Patent Attorney

Registration No. 38,261

Phone No.:

352-375-8100 352-372-5800

Fax No.: Address:

2421 N.W. 41st Street, Suite A-1

Gainesville, FL 32606-6669

DRP/sl

Attachments: copy of erroneous Official Filing Receipt with error noted thereon; copy of page 1 of the subject specification.





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# FILING RECEIPT "OC000000005254368"



### UNITED STATES GEPARTMENT OF COMMERCE Patent and Trademark Office

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COMMISSIONER OF PATENT AND TRADEMARKS Westinglya, D.C. 20231

	APPLICATION NUMBER	FILING DATE	GRP ART UNIT	fil fee rec'd	ATTY,DOCKET,NO	DRAWINGS	TOT CLAIMS	IND CLAIMS	
•	09/508,342	06/05/2000	1646	797	SP0-108	_31°	10	5	

**DORAN R PACE** SALIWANCHIK LLOYD & SALIWANCHIK 2421 NW 41ST STREET SUITE A 1 GAINESVILLE, FL 32606-6669

Date Mailed: 07/20/2000

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

YOSHIYUKI SAKAKI, KANAGAWA, JAPAN; HAJIME TEI, TOKYO, JAPAN;

Continuing Data as Clairned by Applicant

THIS APPLICATION IS A 371 OF PCT/JP98/04125 09/11/1993

Foreign Applications

JAPAN 9/267846 09/12/1997

If Required, Foreign Filing License Granted 07/19/2000

Title

J.NVOLVED

MAMMALIAN GENES PARTICIPATING IN CIRCADIAN PERIOD

**Preliminary Class** 

435

Data entry by ; BARRETO, NGA

Team: OIPE

Date: 07/20/2000



SPO-108

#### SPECIFICATION

# MAMMALIAN GENES INVOLVED IN CIRCADIAN PERIODS

### Technical Field

The present invention relates to mammalian genes whose expression changes with a circadian period.

## Background Art

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Many biochemical processes, physiological processes, and 10 behavioral processes in various organisms ranging microorganisms to vertebrates exhibit circadian rhythms (Edmunds, L. N. J., Cellular and Molecular Basis of Biological Clock, Springer-Verlag, New York, 1988). Several genes have been suggested to be involved in circadian rhythms.

For example, two mammalian circadian clock mutations have been confirmed thus far. They are Clock of the mouse (Vicatorna, M. H., et al., Science 264: 719-725, 1994) and tau of the hamstor (Ralph, M. R. and Menaker, M., Science 241: 1225-1227, 1988). The Clock gene has recently been identified and is believed to encode a transcription factor in the circadian clock (Moor, R. Y. and Eichler, V. B., Brain Res. 42: 201-206: 1972; Stephan, F. K. and Zucker, I., Proc. Natl. Acad. Sci. USA 69: 1583-1586, 1972). On the other hand, the tau gene has not yet been cloned.

The period (per) gene has been isolated from Drosophila as a gene necessary for the expression of circadian rhythms for locomotive activities and eclosion behavior (Konopka, R. J. and Benzer, S., Proc. Natl. Acad. Sci. USA 68: 2112-2116, 1971). In the brain of the fly the oscillation of the levels of the per mRNA and of the PERIOD (dPER) protein are thought to determine the rhythms (Hardin, P. E., et al., Nature 343: 536-540, 1990; Zerr, D. M., et al., J. Neurosci. 10: 2749-2762, 1990). Nowever, per homologues in other organisms than insects have not been identified.

# Disclosure of the Invention

An object of the present invention is to provide novel